
BioMax Environmental
Environmental Consulting and Industrial Hygiene Services

February 8th, 2008

Mr. Doug Button
Deputy Director
Real Estate Services Division
707 Third Street - 8th Floor
West Sacramento, CA 95605

Mitigation Procedures for 10th Floor Mitigation – Break Room Area
Department of General Services Board of Equalization Building
450 N. Street
Sacramento, California

Dear Mr. Button,

BioMax Environmental, LLC (BioMax) is pleased to provide the Department of General Services (DGS) with this letter summary report detailing BioMax's findings and recommendations pertaining to our inspection and microbial sampling assessment services provided within the moisture and mold impacted areas associated with the 10th Level Break Room of your 450 N Street Building (subject building) located in Sacramento, California. BioMax understands that these microbial inspection and sampling assessment services were contracted with BioMax in an effort to evaluate the recently discovered visible microbial growth identified within the noted Break Room (1004) and adjacent Conference Room (1002) and Office (1003). According to DGS personnel, such areas were identified during the performance of restoration activities resultant of a tenant sink overflow incident within the Break Room first reported on January 23rd, 2008. BioMax also understands that subsequent removal and inspection of the affected basboard materials within the affected areas revealed the presence of previous visible mold growth present along the interior wallboard areas associated with the noted impacted areas.

Hence, these microbial inspection and assessment services are intended to provide physical information pertaining to the current environmental conditions present within the affected interior areas and impacted materials identified. Site access was provided on Tuesday, February 5th, 2008 by DGS representatives. On this day, Mr. Michael A. Polkaba, CIH, REA of BioMax performed a site inspection and sampling assessment within and adjacent to the areas of concern identified by DGS representatives. Based on information provided and our visual observations gathered at this time, BioMax collected a series of surface microbial samples of the representative affected materials and areas to evaluate and assess the current environmental microbial conditions within and surrounding the impacted areas.

SITE OBSERVATIONS

On-site inspection and sampling assessment activities were performed by Mr. Michael A. Polkabla, CIH, REA, of BioMax in accordance with currently recognized microbial assessment and sampling guideline procedures. Mr. Polkabla has been certified in the Comprehensive Practice of Industrial Hygiene by the American Board of Industrial Hygiene and holds the right to the designation "Certified Industrial Hygienist" (CIH) under certification number CP 7104. Mr. Polkabla is also certified by the California Environmental Protection Agency (Cal/EPA) as a Class I Registered Environmental Assessor (REA) under Cal/EPA certification number 05011. A summary of significant notations and observations gathered during BioMax's site inspection and assessment of the subject areas are compiled as follows:

1. At the time of our preliminary site inspection performed on February 5th, 2008 interior environmental conditions within the subject area consisted of a temperature of 71 degrees F with relative humidity of 21 %. Ambient outdoor conditions both prior to and following our interior assessment consisted of mild sunny conditions with predominant winds noted at approximately 0-5 knots from the northwesterly direction. Outdoor temperatures ranged between 55 and 59 degrees and relative humidity range of 65 to 49 %, respectively.
2. Observations noted within each of the subject areas are as follows:

Conference Room (#1002) – At the time of our assessment, the vinyl baseboards located along the northern wall indicated evidence of prior removal and were observed taped back onto the wall and carpet surfaces with grey duct tape material. Upon localized removal (for inspection), approximately 2 linear feet of "spotty" visible mold growth was observed present beneath the baseboard materials located along the northern interior wall (shared wall with the break room area). At this time, a surface BioTape sample was collected from the stained material and the baseboard was promptly re taped along the wall and carpet junctions.

Office (#1003) - At the time of our assessment, a BOE occupant was observed residing and present within the noted office area. Upon introduction and entry, BioMax observed that the vinyl baseboards located along the southern and eastern corner wall indicated evidence of similar prior removal and were observed taped back onto the wall and carpet surfaces with grey duct tape material. Due to the presence of the noted occupant, BioMax elected not to breach the observed containment to collect any wall samples. However, surface samples of office furnishings were collected and reported later in this report from this area.

Break Room Area (#1004) – Prior to entry into this area, BioMax noted the intact plastic barrier and warning sign placed on the entry so as to preclude unauthorized access. Upon entry at the time of our assessment, BioMax observed that HVAC plastic sheeting had been previously placed on the ceiling supply and return register grates but were not currently in place due to a lack of adequate adhesion onto the mated ceiling surfaces. BioMax also noted that the vinyl baseboards located along the northern, western, southern and eastern walls

indicated evidence of prior removal and were observed taped back onto the wall and carpet surfaces with grey duct tape material. Upon localized removal (for inspection) of the northern and western walls (along the sink cabinet), BioMax noted approximately 6+ linear feet of significant visible mold-like growth along the northern wall behind the refrigerator and spotty mold-like growth observed present beneath the vinyl baseboard materials located beneath the sink cabinetry. At this time, surface BioTape samples were collected from the stained material and the baseboard was subsequently re-taped along the wall and floor tile junctions. An additional BioTape sample was also collected on the exposed cabinet top surface so as to assess the potential for airborne spore deposition within the noted break room area. Upon exit, BioMax re-taped the access door from the hallway and notified DGS via e-mail a summary of immediate recommended actions to secure the areas and re-establish affective ceiling register barriers following the performance of this assessment.

3. BioMax collected a series of surface samples from representative impacted building materials and surfaces located within the visibly affected interior materials noted above to assess their current microbial condition as noted in Table 1 below. Utilization of hand-held moisture detection equipment indicated elevated moisture content within the affected wall materials surveyed within the break room at the time of our assessment.
4. In an effort to further evaluate the potential for spore deposition resultant from airborne transmission from the noted areas, BioMax also collected a series of interior surface samples within the adjacent immediate work area as also noted within Table 1 below. Wherever possible, surface samples were collected from accessible surfaces during normal routine employee operations and activities so as to model representative conditions within the working environment.
5. A series of digital images were also collected during BioMax's inspection and sampling assessment activities. Images are attached to this summary report for further reference, as necessary. A detailed site map sketch indicating the extent of visibly affected areas noted at the time of this assessment and relative surface sampling locations is also provided as an attachment to this report for further reference.

SAMPLING PROCEDURES

On-site inspection and sampling assessment activities were conducted by Mr. Michael A. Polkaba, CIH, REA, of BioMax Environmental on February 5th, 2008. All sampling equipment, supplies, calibration materials, and collection media were provided by BioMax as part of the performance of this scope of work. Sample collection procedures and methods were performed using aseptic sampling methods following techniques prescribed by the contracted analytical laboratory.

BioTape Surface Sampling:

During our site inspection and sampling assessment activities, representative surface material samples were collected from interior areas and materials of concern noted within in Table 1 below. All surface samples were collected using "same-lot" BioTape collection media prepared and supplied by SKC International. Disposable gloves were changed prior to collection of each sample and were collected in accordance with manufacturers sampling guidelines as well as applicable professional certified industrial hygiene microbial investigation practices. Written sampling procedural guidance material prepared by the analytical laboratory and/or sample media manufacturer may also be provided upon request. A summary of surface material sampling locations are provided in Table 1. Specific sample locations may also be referenced within the digital image attachment and site map diagram provided at the conclusion of this report, as necessary.

Table 1. BioTape Surface Sample Locations:

Sample Number	Material Sampling Location
S01	Conference Room 1004 Table Top surface
S02	Conference Room 1004 Chair Arm (wood) Surface
S03	Conference Room 1004 North "Stained" Wallboard Under Baseboard
S04	Office 1003 Wood Bookcase Surface
S05	Office 1003 Metal File Cabinet
S06	Cubicle Metal File Cabinet in adjacent 1014 Area
S07	Cubicle Divider Top Surface in adjacent 1014 Area (indoor plant in close prox.)
S08	Cubicle Divider Top Surface in adjacent 1014 Area
S09	Cubicle Bookcase Top Surface in adjacent 1014 Area
S10	Break Room Storage Cabinet Top Surface
S11	Break Room Northern Wall Behind Refrigerator (significant staining present)
S12	Break Room Sink Cabinet Sub Baseboard Material (staining present)
S13	Field control Method Blank (QA/QC)

Following collection, samples were subsequently labeled and placed within individual plastic Ziploc storage bags for transportation via Federal Express Priority Mail to the analytical laboratory noted below. Preparation and shipping of the collected samples were accomplished in accordance with standard industrial hygiene chain of custody (COC) documentation procedures

and quality assurance/quality control QA/QC practices. Once collected, labeled, and recorded, the samples were double sealed within airtight plastic Ziploc bag containers and transported via Federal Express Priority Mail to Environmental Microbial Laboratories (EMLabs) of San Bruno, California. EMLabs holds current analytical accreditation and specializes in microbial analytical procedures. Sampling and chain of custody records are provided as an attachment to this letter report for further reference.

ANALYTICAL FINDINGS AND CONCLUSIONS

Surface Sample Material Findings:

Laboratory analytical methods for the identification and enumeration of microbial taxa were conducted in accordance with prescribed analytical procedures and quality control/assurance measures. Laboratory analytical methods for the identification and enumeration of microbial fungal contaminants within the collected surface material samples were achieved through direct microscopic analysis using bright field microscopy.

Original laboratory results including the identification of recognizable microbial taxa are provided as an attachment to this letter report for further reference. Sampling and chain of custody records are provided as an attachment to this report for further reference. A summary of analytical findings pertaining to the collected bulk material samples is presented in Table 2 below:

Table 2. Summary of Surface Material Findings:

Sample Number	Sample Material and Location	Mold Genera Identified Present
S01	Conference Room 1004 Table Top surface	No Mold Spores Detected
S02	Conference Room 1004 Chair Arm (wood) Surface	No Mold Spores Detected
S03	Conference Room 1004 North "Stained" Wallboard Under Baseboard	Elevated Chaetomium, Penicillium/Aspergillus, and Ulocladium Spores detected
S04	Office 1003 Wood Bookcase Shelf Surface	No Mold Spores Detected
S05	Office 1003 Metal File Cabinet Surface	No Mold Spores Detected
S06	Cubicle Metal File Cabinet in adjacent	No Mold Spores Detected

Sample Number	Sample Material and Location	Mold Genera Identified Present
	1014 Area	
S07	Cubicle Divider Top Surface in adjacent 1014 Area (indoor plant in close prox.)	One single raw count of "brown" spore identified on surface.
S08	Cubicle Divider Top Surface in adjacent 1014 Area	No Mold Spores Detected
S09	Cubicle Bookcase Top Surface in adjacent 1014 Area	No Mold Spores Detected
S10	Break Room Storage Cabinet Top Surface	Five (5) raw counts of Stachybotrys spores were identified on surface.
S11	Break Room Northern Wall Behind Refrigerator (significant staining present)	Elevated Stachybotrys and Penicillium/Aspergillus spore levels detected on surface
S12	Break Room Sink Cabinet Sub Baseboard Material (staining)	Elevated Chaetomium and Penicillium/Aspergillus spores detected on noted surface.
S13	Field control Method Blank (QA/QC)	No Mold Spores Detected

Noted relative levels should be used for comparative purposes only and are not intended to establish "safe" or "acceptable" indoor levels/conditions.

Analytical findings as presented in Table 2 above clearly indicated the presence of unique microbial fragments (spores) present in each of the materials sampled where staining was noted. The identified hydrophilic (moisture loving) mold taxa, such as Stachybotrys, Penicillium/Aspergillus, Ulocladium, and Chaetomium, identified within the visibly "stained" materials sampled, represent what BioMax believes to be likely indicative of prior mold growth and likely not resultant directly from the singular recent January water release incident.

Although there are currently no regulatory standards or limits pertaining to allowable surface fungal concentrations (for any mold taxa) present on interior working environment surfaces, there is a general consensus among indoor air quality and microbial experts that significant visible microbial contamination found within occupied space building materials should be treated, removed, and/or otherwise minimized wherever practicable. Hence, BioMax believes that the findings detailed in this report warrant the implementation of the recommended precautions, continued area controls, and the performance of mitigative measures pertaining to the areas of identified visible microbial contamination.

Analytical findings pertaining to the surface sample data gathered within the adjacent occupied areas performed as part of this assessment currently fall within generally acceptable ranges and parameters. Hence, BioMax believes that the current surface sample data evaluated within the adjacent occupied areas (areas other than the Break Room) provide no significant evidence of airborne transmission, distribution, or mold spore deposition onto adjacent area surfaces at present. Therefore, BioMax believes that no area specific particulate removal and/or cleaning measures are warranted within areas outside of the affected break room impacted areas at this time.

RECOMMENDATIONS

Based on our preliminary observations within the subject building and review of current analytical findings available at this time, BioMax recommends that the following corrective measures and mitigative actions be considered as follows:

1. Due to the confirmed findings of elevated microbial contamination present within the sampled building materials and areas noted in this report, BioMax recommends that additional deconstructive inspection and appropriate mitigation the affected interior structures, walls, and wall cavities within the subject areas be performed as noted below. The purpose of these activities should be to adequately assess and evaluate the full extent of any moisture intrusion and microbial damages within each of the noted areas under appropriate microbial mitigative protective containment systems.
2. In performing such mitigative measures, BioMax recommends that a qualified and experienced microbial abatement contractor be selected to erect critical containment barriers at the entrances to Rooms 1002, 1003, and 1004 and perform microbial mitigative measures within each of the interior areas noted. The selected contractor must be specifically trained in the field of microbial abatement techniques and methods as well as maintain demonstrated proficiency in the establishment and use of appropriate barriers, personal protective equipment, abatement techniques and methods in the removal and decontamination of microbial affected and impacted materials.
3. Due to the current occupancy and client use within the areas adjacent to the affected break room, as a precautionary measure, BioMax recommends that the tenant immediately relocate any occupancy and operations within each of the rooms noted until further notice. Once relocation is achieved, the selected contractor should be directed to install a series of fully enclosed negative pressure environmental containment barriers encompassing each of the water damaged and mold affected areas during removal, inspection, and treatment. These containment systems shall be designed for the purposes of containing and controlling possible fugitive emissions of airborne fungal spore contaminants during all forthcoming deconstruction, inspection, and mitigative activities within the premises. All critical containment systems shall be constructed of plastic and/or otherwise airtight materials so as

to create a negative pressure system within the noted areas of concern. Due to physical constraints, all negative air pressure shall be maintained within the critical areas with the use of a High Efficiency Particulate Aerosol (HEPA) filtered "negative air machine" vented to the outside workspace environment. An adequate supply of HEPA filtered intake air shall also be established to allow an adequate supply of "clean" filtered make-up air into the critical containment. Wherever possible, clear translucent plastic observation windows shall be placed on the critical containment barrier within direct sight of the affected areas for the purposes of inspection during the performance of prescribed mitigative measures. BioMax is prepared to provide your selected contractor with additional and ongoing detail pertaining to the establishment maintenance, and specific locations of critical containment barriers, as necessary. Once, containment parameters have been established, the site contractor shall maintain an "as built" record of exact containment locations and materials for further review and reference.

4. As an additional precautionary measure (and at the request of BOE's environmental consultant), HEPA filtered air scrubber units will be operated in the hallway and room 1014 for the duration of mitigative activities.
5. A series of similar plastic and/or otherwise impermeable zippered entry chambers shall also be erected at the entrance of the containment systems for the purpose of establishing worker entrance/exit and clean personal protective equipment donning and decontamination area. HEPA filtered vacuum equipment capable of the effective removal of particulate contaminants from tools and personal protective equipment shall be placed within each of the zippered chambers closest to the working area. During such measures, appropriate signage and warnings must be posted on the exterior of containment entrances to preclude uninformed access from unauthorized personnel. Data logging monitoring equipment employed to record pressure differentials on a 24-hour basis shall be used for the duration of functional barrier use.
6. Upon establishment of critical containment barriers, BioMax recommends that the selected microbial abatement contractor also places and maintains appropriate HEPA filtered air-scrubbing and/or dehumidification units within the affected areas, as necessary. All Heating Ventilation and Air Conditioning (HVAC) supply vents and ceiling or wall mounted recessed lighting/ fan penetrations within the containment systems shall be deactivated and covered within similar plastic barrier systems. All appropriate wall and ceiling penetrations present within the containment systems shall also be sealed and/or otherwise rendered airtight and inoperable so as to minimize unfiltered particulate intrusion into and out of the established containment systems. It is specifically recommended that the ceiling tile level materials be critically sealed from the working areas within each of the noted containment rooms so as to preclude fugitive emissions from exiting the noted containments. Any smoke detectors and/or fire suppression systems shall NOT be covered nor rendered inoperable within the subject building unless authorized to do so under the direction and supervision of personnel.
7. Due to the visual impacts associated with the hallway located along the northern side of the break room area, BioMax also recommends that a plastic containment barrier also be

established from floor to ceiling along the noted wall as a precautionary measure for forthcoming inspection and physically accessible removal break room interior space.

8. Workers engaged in mold remediation/mitigation activities must be adequately trained and equipped with properly selected personal protective equipment (PPE) including, at minimum, hooded Tyvek coveralls, air purifying full face respirators with N100 minimum HEPA filter rating or similar PAPR systems, nitrile or latex gloves, chemical resistant boots or boot covers, with taped joints. Site control zones shall be established with exclusion, contaminant reduction (decontamination), and support zones in accordance with published Environmental Protection Agency (EPA) and California Department of Occupational Safety and Health (Cal/OSHA) guidelines. BioMax would be happy in providing the selected contractor with further site-specific detail regarding PPE regimen and appropriate site control zones, as necessary.
9. BioMax recommends that any interior items or furnishings located within the immediate areas of Rooms 1002 and 1003 (Conference Room and Office, respectively) be relocated from the containment area systems prior to the establishment of negative pressure containment and mitigative activities. All materials and furnishings currently present within the Break Room area should remain in place for appropriate disposal and/or decontamination as noted below. As a precautionary measure, all hard surface furnishings within the break room deemed salvageable by DGS shall receive a thorough inspection, cleaning, mildicide wet-wiping, and HEPA vacuuming as part of these recommended procedures prior to subsequent clearance testing and reuse.
10. BioMax specifically recommends that sheetrock and wallboard materials within each noted room where visual evidence of potential moisture intrusion and damages has been identified, be removed for inspection of the interior and adjacent wall cavities/underlayment. As verified through inspection, any affected interior sheetrock and building materials should be removed, wherever feasible, to the extent of visible staining, at a minimum. Carpeting present within the conference room and office room shall also be removed under containment controls for appropriate inspection of subflooring. Removal of moisture impacted and mold damaged materials shall employ the use of appropriate item-specific containment methods and systems (such as sealed plastic glove-bag containment systems, or equivalent) applicable to the materials being removed. BioMax currently anticipates that all visually affected sheetrock, floor mounted cabinets and floor covering materials present within the break room shall be removed for disposal, and physical inspection of wall cavities and underlayment, as necessary. Any underlayment materials exhibiting visible signs of moisture staining shall also be removed or decontaminated (as noted below), as necessary.
11. Other potentially affected areas and building materials encountered during these deconstructive and investigative stages, such as adjacent wall studs, underlayment, etc., must be thoroughly inspected during these deconstructive stages to identify any potential signs of additional microbial related materials and water damage indicators. In general, all microbial impacted materials shall be removed to the extent of visible staining and at least 2 feet beyond such identified perimeters, wherever possible.

12. All remaining moisture/mold affected porous and non-porous building materials deemed infeasible for removal and/or disposal (due to structural integrity concerns) shall be inspected and receive a series of decontamination treatment measures designed to minimize and control the presence of microbial related substances. Decontamination methods employed shall, at a minimum, include treatment of all identified surfaces with a series of thorough chlorine based mildicide (minimum 10 parts water to 1 part chlorine soln.) applications followed by a series of thorough HEPA filtered vacuuming procedures using power sanding and/or brush agitation. The duration and frequency of mildicide and HEPA sanding/brushing applications employed may vary depending on local material contamination but shall be sufficient in removing and decontaminating all visible surface staining to levels deemed by BioMax to be consistent with representative background levels. Reasonable additional mitigative measures and controls may be required, as necessary, upon discovery of additional contaminated materials as well as BioMax's site inspection findings and observations performed during this scope of work. BioMax would be happy to provide ongoing consultation with the contractor pertaining to these measures and site/material specific decontamination measures upon request.
13. Upon completion of mitigation efforts performed by the selected microbial abatement contractor, BioMax recommends the performance of a visual inspection conducted by the Project Certified Industrial Hygienist (CIH) to verify that all significant mold related staining and moisture indicators have been removed and/or treated and that all prescribed mitigative efforts and measures have been appropriately achieved. Once established, it is recommended that the CIH collect a series of microbial "clearance" air samples to verify that all affected interior areas have been appropriately decontaminated to acceptable background airborne levels and that the affected areas within the subject building are verified as "cleared" for reconstruction, forthcoming reoccupancy, and reuse. Additional "punch-list" action items may be provided to the contractor following the performance of this site clearance inspection prior to receipt of analytical results, as deemed necessary.
14. Upon review of analytical sampling results by the CIH and achievement of acceptable clearance criteria, BioMax recommends that the mitigation/reconstruction contractor to apply a mildicide-based sealant onto all remaining organic-based building materials and treated surfaces. Use of a recognized commercially available encapsulant/sealant product with microbial growth inhibitors in accordance with manufacturer's application and use instructions is believed to be currently acceptable for these purposes. Following the achievement of acceptable clearance criteria, the provision of appropriate access shall be provided to BOE and its consultants for inspection of affected areas and materials prior to final encapsulation and reconstruction.
15. Following the performance of these mitigative measures, the designated site reconstruction contractor is strongly encouraged to verify that repairs to any faulty and/or deficient building penetration, drainage, plumbing and/or building envelop sealing systems have been appropriately inspected, replaced/repared, and function tested prior to the reconstruction of the affected interior structures and cavities. Certainly, the repair/replacement and/or

establishment of any such additional engineering controls (as recommended through additional professional consultation) must be performed and implemented in accordance with applicable standards, building codes, and ordinances, as necessary.

16. Upon completion, reconstruction of interior structural materials should be undertaken utilizing visibly clean (hand selected) construction grade materials in accordance with applicable building codes and requirements. The reconstruction contractor shall be required to only select materials which are obtained from reputable commercial sources and which are believed and visually verified to be free from elevated microbial contamination and/or elevated moisture content. New building materials, which are notably moist and/or visibly stained, shall NOT be used during the reconstruction of the subject structure. BioMax specifically recommends that reconstruction materials selected for use in the break room areas be specifically selected based on their moisture deterrent and anti-microbial properties wherever feasible.
17. Reasonable additional assessment and mitigative measures may also be required upon the identification of new or previously undiscovered materials and/or information related to moisture/microbial impacts, as necessary. Any reoccurrence of moisture intrusion following reconstruction should certainly be reviewed and addressed through further professional consultation, as necessary. BioMax would be happy to provide additional microbial consultative services pertaining to the mitigation of such structures so as to minimize any adverse impacts to the interior environment during the performance of any such activities upon request..

Once again, it has been a pleasure working with DGS on these important matters. If you have any additional questions, comments, or require further assistance, please do not hesitate to contact me directly at (510) 724-3100.

Sincerely,

Michael A. Polkable, CIH, REA
Vice President, Principal

LIMITATIONS

Please note that the professional opinions presented in this review are intended for the sole use of DGS and their designated beneficiaries. No other party should rely on the information contained herein without the prior written consent of BioMax Environmental and DGS. The professional opinions provided herein are based on BioMax's review and understanding of current site information and observed site conditions present within the areas inspected at the time these services were performed. Professional recommendations provided as part of this limited scope of work are intended for client consideration only and are not intended as a professional or regulatory mandate. Implementation of any of the above measures or recommendations does not, in any way, warrant the day-to-day health and/or safety of building occupants, residents, site workers, nor regulatory or building code compliance status during normal and changing environmental conditions. As microbial contamination, by nature, may change over time due to additional moisture intrusion, favorable growth conditions, and changing environments, the findings of this report are subject to change in the event that such conditions and/or environments arise. Also, the professional opinions expressed here are subject to revision in the event that new or previously undiscovered information is obtained or uncovered.

The information contained in this and any other applicable report communication is intended for consideration purposes only. It is not intended, nor should it be construed as providing legal advice or warranting any level of safety or regulatory compliance. The sole purpose of such information is to assist with the identification, evaluation and control of potential contamination or unnecessary physical, chemical, and/or biological hazards. Any action taken based on this information, including but not limited to opinions, suggestions and recommendations, whether implied or expressed, is the sole responsibility of the individual taking the action. Risk management and safety is criteria dependent and situation specific requiring extensive knowledge and value assessments to be properly determined by competent professionals.

These services were performed by BioMax in accordance with generally accepted professional industrial hygiene principals, practices, and standards of care. Under the existing Industrial Hygiene Definition and Registration Act, all reports, opinions or official documents prepared by a Certified Industrial Hygienist (CIH) constitutes an expression of professional opinion regarding those facts or findings which are subject of a certification and does not constitute a warranty or guarantee, either expressed or implied.

**EMLab P&K**

Report for:

Mr. Michael Polkabia
Biomax Environmental
775 San Pablo Ave.
Pinole, CA 94564

Regarding: Project: BOE 10th Floor
EML ID: 385636

Approved by:

A handwritten signature in black ink, appearing to read 'Dr. Kamashwaran Ramanathan'.

Lab Manager
Dr. Kamashwaran Ramanathan

Dates of Analysis:
Quantitative spore count direct exam: 02-07-2008

Project SOPs: Quantitative spore count direct exam (1100006)

This coversheet is included with your report in order to comply with AIHA and ISO accreditation requirements.

For clarity, we report the number of significant digits as calculated; but, due to the nature of this type of biological data, the number of significant digits that is used for interpretation should generally be one or two. All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank corrections of results is not a standard practice. The results relate only to the items tested.

EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

Document Number: 200091 - Revision Number: 5

EMLab P&K

1150 Bayhill Drive, Suite 100, San Bruno, CA 94066
(650) 829-5800 Fax (650) 829-5852 www.emlab.com

Client: Biomax Environmental
C/O: Mr. Michael Polkabila
Re: BOE 10th Floor

Date of Sampling: 02-05-2008

Date of Receipt: 02-06-2008

Date of Report: 02-07-2008

QUANTITATIVE SPORE COUNT REPORT

Location:	S01		S02		S03		S04		S05	
Comments (see below)	None		None		None		None		None	
Sample type	Tape sample		Tape sample		Tape sample		Tape sample		Tape sample	
Lab ID-Version†:	1692052-1		1692053-1		1692054-1		1692055-1		1692056-1	
	raw ct.	spores/unit	raw ct.	spores/unit	raw ct.	spores/unit	raw ct.	spores/unit	raw ct.	spores/unit
Alternaria										
Arthrinium										
Ascospores*										
Aureobasidium										
Basidiospores*										
Bipolaris/Drechslera group										
Botrytis										
Chaetomium					251	130,000				
Cladosporium										
Curvularia										
Epicoccum										
Fusarium										
Myrothecium										
Nigrospora										
Other brown										
Other colorless										
Penicillium/Aspergillus types†					1,524	4,900,000				
Pithomyces										
Rusts*										
Smuts*, Periconia, Myxomycetes*										
Stachybotrys										
Stemphylium										
Torula										
Ulocladium					442	240,000				
Zygomycetes										
Background debris (1-4+)††	< 1+		1+		2+		1+		1+	
Sample size	0.155		0.155		0.155		0.155		0.155	
Unit	1 in2		1 in2		1 in2		1 in2		1 in2	
TOTAL SPORES/UNIT		< 6.5		< 6.5		5,270,000		< 6.5		< 6.5

Comments:

* Most of these spore types are not seen with culturable methods (Andersen sampling), although some may appear as nonsporulating colonies. Most of the basidiospores are 'mushroom' spores while the rusts and smuts are plant pathogens.

† The spores of *Aspergillus* and *Penicillium* (and others such as *Acremonium*, *Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by non viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.

†† Background debris is an indication of the amount of non-biological particulate matter present on the slide (dust in the air) and is graded from 1+ to 4+ with 4+ indicating the largest amounts. This background material is also an indication of visibility for the analyst and resultant difficulty reading the slide. For example, high background debris may obscure the small spores such as the *Penicillium/Aspergillus* group. Counts from areas with 4+ background debris should be regarded as minimal counts and may actually be higher than reported.

‡ A "Version" greater than 1 indicates amended data.

EMLab P&K

1150 Bayhill Drive, Suite 100, San Bruno, CA 94066
(650) 829-5800 Fax (650) 829-5852 www.emlab.comClient: Biomax Environmental
C/O: Mr. Michael Polkabila
Re: BOE 10th FloorDate of Sampling: 02-05-2008
Date of Receipt: 02-06-2008
Date of Report: 02-07-2008

QUANTITATIVE SPORE COUNT REPORT

Location:	S06		S07		S08		S09	
Comments (see below)	None		None		None		None	
Sample type	Tape sample		Tape sample		Tape sample		Tape sample	
Lab ID-Version†:	1692057-1		1692058-1		1692059-1		1692060-1	
	raw ct.	spores/unit	raw ct.	spores/unit	raw ct.	spores/unit	raw ct.	spores/unit
Alternaria								
Arthrinium								
Ascospores*								
Aureobasidium								
Basidiospores*								
Bipolaris/Drechslera group								
Botrytis								
Chaetomium								
Cladosporium								
Curvularia								
Epicoccum								
Fusarium								
Myrothecium								
Nigrospora								
Other brown				34				
Other colorless								
Penicillium/Aspergillus types†								
Pithomyces								
Rusts*								
Smuts*, Periconia, Myxomycetes*								
Stachybotrys								
Stemphylium								
Torula								
Ulocladium								
Zygomycetes								
Background debris (1-4+)††	1+		1+		1+		1+	
Sample size	0.155		0.155		0.155		0.155	
Unit	1 in2		1 in2		1 in2		1 in2	
TOTAL SPORES/UNIT		< 6.5		34		< 6.5		< 6.5

Comments:

* Most of these spore types are not seen with culturable methods (Andersen sampling), although some may appear as nonsporulating colonies. Most of the basidiospores are 'mushroom' spores while the rusts and smuts are plant pathogens.

† The spores of *Aspergillus* and *Penicillium* (and others such as *Acremonium*, *Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by non viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.

†† Background debris is an indication of the amount of non-biological particulate matter present on the slide (dust in the air) and is graded from 1+ to 4+ with 4+ indicating the largest amounts. This background material is also an indication of visibility for the analyst and resultant difficulty reading the slide. For example, high background debris may obscure the small spores such as the *Penicillium/Aspergillus* group. Counts from areas with 4+ background debris should be regarded as minimal counts and may actually be higher than reported.

‡ A "Version" greater than 1 indicates amended data.

EMLab ID: 385636, Page 2 of 3

EMLab P&K

1150 Bayhill Drive, Suite 100, San Bruno, CA 94066
(650) 829-5800 Fax (650) 829-5852 www.emlab.com

Client: Biomax Environmental
C/O: Mr. Michael Polkabla
Re: BOE 10th Floor

Date of Sampling: 02-05-2008
Date of Receipt: 02-06-2008
Date of Report: 02-07-2008

QUANTITATIVE SPORE COUNT REPORT

Location:	S10		S11		S12		S13	
Comments (see below)	None		None		None		None	
Sample type	Tape sample		Tape sample		Tape sample		Tape sample	
Lab ID-Version†:	1692061-1		1692062-1		1692063-1		1692064-1	
	raw ct.	spores/unit	raw ct.	spores/unit	raw ct.	spores/unit	raw ct.	spores/unit
Alternaria								
Arthrinium								
Ascospores*								
Aureobasidium								
Basidiospores*								
Bipolaris/Drechslera group								
Botrytis								
Chaetomium					204	7,000		
Cladosporium								
Curvularia								
Epicoccum								
Fusarium								
Myrothecium								
Nigrospora								
Other brown								
Other colorless								
Penicillium/Aspergillus types†			178	96,000	192	100,000		
Pithomyces								
Rusts*								
Smuts*, Periconia, Myxomycetes*								
Stachybotrys	5	170	4,425	2,400,000				
Stemphylium								
Torula								
Ulocladium								
Zygomycetes								
Background debris (1-4+)††	1+		2+		2+		None	
Sample size	0.155		0.155		0.155		0.155	
Unit	1 in2		1 in2		1 in2		1 in2	
TOTAL SPORES/UNIT		170		2,496,000		107,000		< 6.5

Comments:

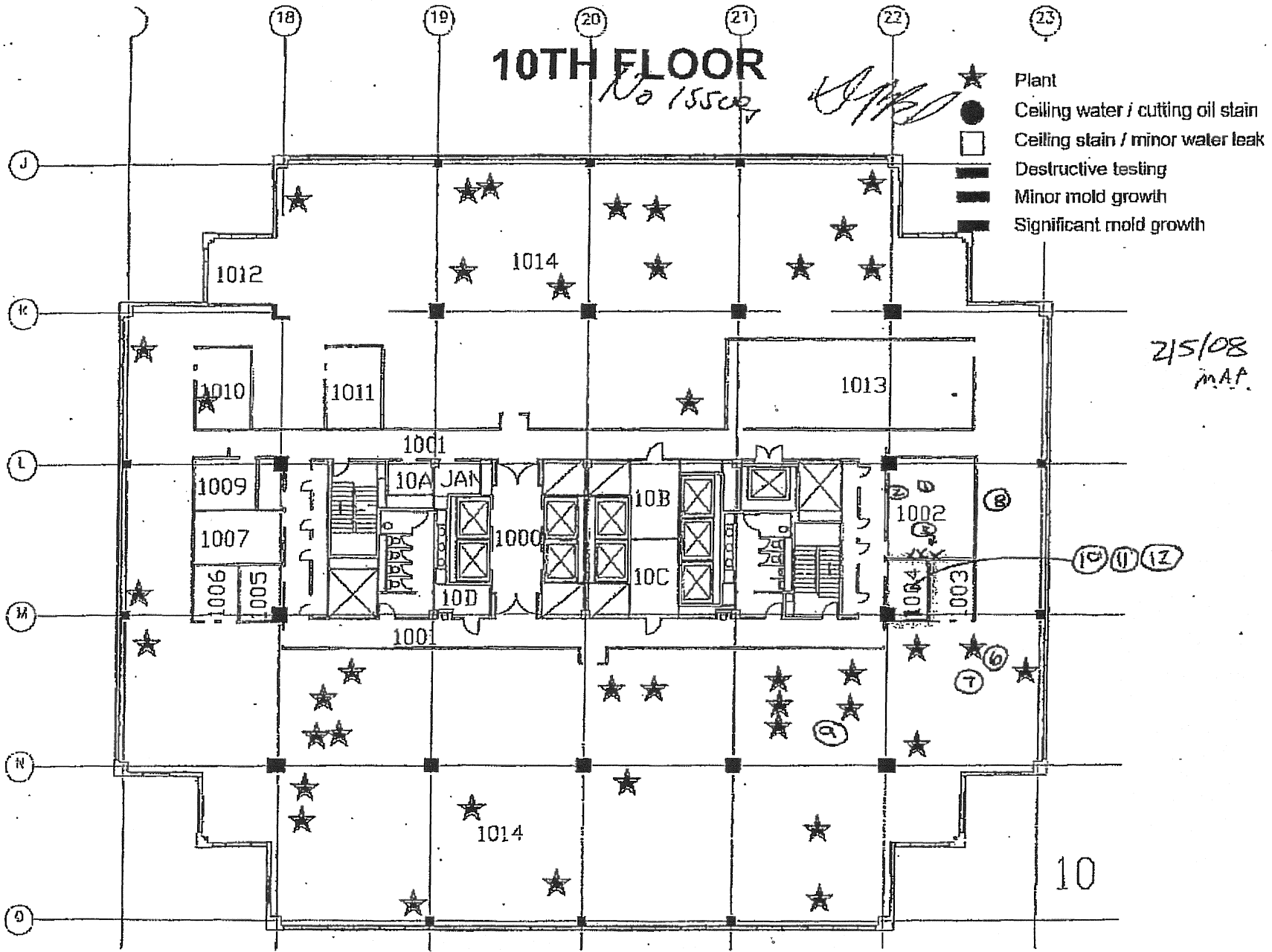
* Most of these spore types are not seen with culturable methods (Andersen sampling), although some may appear as nonsporulating colonies. Most of the basidiospores are 'mushroom' spores while the rusts and smuts are plant pathogens.

† The spores of *Aspergillus* and *Penicillium* (and others such as *Acremonium*, *Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by non viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.

†† Background debris is an indication of the amount of non-biological particulate matter present on the slide (dust in the air) and is graded from 1+ to 4+ with 4+ indicating the largest amounts. This background material is also an indication of visibility for the analyst and resultant difficulty reading the slide. For example, high background debris may obscure the small spores such as the *Penicillium/Aspergillus* group. Counts from areas with 4+ background debris should be regarded as minimal counts and may actually be higher than reported.

‡ A "Version" greater than 1 indicates amended data.

EMLab ID: 385636, Page 3 of 3



10TH Floor
Break Rm Areas

N
↑

(506)

(509)

(507)

(carpet)

1003

(504)

(510)

(511)

1004

[FRANK
TILE]

(505)

(512)

(508)

X - Baseboard covered
+ taped

(carpet)

1002

(502)

(508)

(501)

CHAIN OF CUSTODY

www.EMLabP&K.com

Cherry Hill, NJ: 1936 Olney Avenue, Cherry Hill, NJ 08005 • (866) 871-1984
 Phoenix, AZ: 1501 West Knudsen Drive, Phoenix, AZ 85027 • (602) 461-4802
 San Bruno, CA: 1150 Bayhill Drive, #100, San Bruno, CA 94066 • (866) 888-6653
 San Diego, CA: 5473 Kearny Villa Road, #130, San Diego, CA 92123 • (866) 465-6653



WEATHER	Fog	Rain	Snow	Wind	Clear
None					
Light					
Medium					
Heavy					

REQUESTS

Non-Culturable	Spore Trap	Type Swab Bulk



000385636

CONTACT INFORMATION

Company: Biomax Env Address: 775 San Abdo Ave Pinalo, CA
 Contact: M.A. Polkable Special Instructions: 94564
 Phone: (510) 724 3100

PROJECT INFORMATION

Project ID: BOE 10th Floor
 Project Desc: Sampling
 Zip Code: 94564
 Date & Time: 2/5/08
 PO Number: 020508-01

TURN AROUND TIME CODES - (TAT)

STD - Standard (DEFAULT)
 ND - Next Business Day
 SD - Same Business Day Rush
 WH - Weekend/Holiday

Rushes received after 2pm or on weekends, will be considered received the next business day. Please alert us in advance of weekend analysis needs.

SAMPLE ID	DESCRIPTION	Sample Type (Belmo)	TAT (Above)	Total Volume/Area (as applicable)	NOTES (Time of day, Temp, RH, etc.)
S01		BT	24hr	1 x 1"	
S02					
S03					
S04					
S05					
S06					
S07					
S08					
S09					
S10					
S11					
S12					

Fungi - Spore Trap Analysis	Direct Microscopic Exam (Qualitative)	1-Media Surface Fungi (Genus ID + App. spp.)	Legionella culture
Spore Trap Analysis - Other particles	Quantitative Spore Count Direct Exam	2-Media Surface Fungi (Genus ID + App. spp.)	Total Coliform, E.coli (Presence/Absence)
		3-Media Surface Fungi (Genus ID + App. spp.)	Membrane Filtration (Please specify organism)
		Gutierrez Air Fungi (Genus ID + App. spp.)	MPN Bacteria (Please specify organism)
		Gram Stain and Counts (Culturable Air and Surface Bacteria)	Quantitative Surface Swab
			Substrate Analysis - PCM Airborne Fiber Counts (NIOSH 7400)
			Substrate Analysis - PCM (EPA method 8460/8473-116)
			PCR (Please specify test)

SAMPLE TYPE CODES

BC - BioCassette	CP - Contact Plate	T - Tape	D - Dust
A15 - Anderson	ST - Spore Trap	SW - Swab	W - Water
SAS - Surface Air Sampler	Zefon, Allergenco, Burkard...	B - Bulk	SO - Soil

Q - Other:

RELINQUISHED BY

DATE & TIME

RECEIVED BY

DATE & TIME

<u>M.A. Polkable</u>	<u>2/5/08 4:50</u>	<u>Anna M. M... ..</u>	<u>2-6-08</u>
			<u>9:15</u>

By submitting this Chain of Custody, you agree to be bound by the terms and conditions set forth at www.emlabpk.com/terms.html
 Copyright © 2002-2007 EMLab P&K

